
CBSE SAMPLE PAPER – 12 (Unsolved)

Class-XI

BIOLOGY (THEORY)

Time: 3 Hrs

MM: 70

General Instructions

1. The question paper comprises of five Sections A, B, C, D and E.
2. All questions are compulsory.
3. There is no overall choice however; internal choice has been provided in one question of 2 marks, one question of 3 marks and all the two questions of five marks category. Only one option in such question is to be attempted.
4. Questions 1 to 5 in section A are very short questions of one mark each. These are to be answered in one word or one sentence each.
5. Questions 6 to 9 in section B are short questions of two marks each. These are to be answered in approximately 20-30 words each.
6. Questions 10 to 20 in section C are questions of three marks each. These are to be answered in approximately 30-50 words each. Question 21 is of 4 marks.
7. Questions 22 to 23 in section D are questions of five marks each. These are to be answered in approximately 80-120 words each.
8. Questions 24 to 26 in section E is based on OTBA of 10 marks.

Section – A

1. Define inspiratory reserve volume.
2. What types of joints are found in skull bones and shoulder joint?
3. What is the role of porins in diffusion?
4. Which hormonal deficiency is responsible for cretinism and gigantism?
5. What is serum?

Section – B

6. What would happen if you forget to add cytokinins to the culture medium of plant tissue culture?
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7. Differentiate fibrous joints and cartilaginous joints.
 8. Why bile juice contains no digestive enzymes yet it is important for digestion?
 - 9.
 - a) Name two red algae from where agar is obtained.
 - b) Write the structural formula of adenosine.

Or

Give the overall equation of the chemical changes that take place in pyruvic acid during aerobic respiration in mitochondria.

Section – C

10. What is photophosphorylation? Name its types and differentiate them.
11. Describe the secondary structure of proteins. Give an example.
12. Differentiate open circulation and closed circulation.

Or

Explain the mechanism of generation of light-induced impulses in the retina.

13. Enumerate the chemical events that occur in the process of blood clotting.
 14. Write six distinguishing features of class Mammalia.
 15. Explain three common symptoms of deficiency of mineral nutrients in plants with example of an element that causes each of them.
 16. Describe competitive inhibition of enzyme activity with an example.
 17. What is pulmonary circulation? Describe its importance.
 18. What is hydroponics? How is it carried?
 19. What is binomial nomenclature? Explain with an example.
 20. Differentiate parenchyma and collenchyma.
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21. During an excursion to a botanical garden, the teacher shows an old tree which was on the verge of extinction. As soon as the teacher advanced with the students, some enthusiastic students climbed up the tree and started cutting the branches, collecting its leaves as precious collection. Rajesh instead took photographs of the tree from various angles. The boys mocked at Rajesh while the teacher appreciated him.

- a) What values did Rajesh possess?
- b) Why should we conserve biodiversity?
- c) How can biodiversity be conserved?

Section – D

1. Draw an animal cell as seen under an electron microscope and label 10 parts in it.

Or

Define turgor pressure. Describe the opening and closing of stomata with an emphasis on the role of potassium ions in the process.

2.

- a) What is centromere?
- b) How does the position of centromere form the basis of classification of chromosomes?
- c) Support your answer with a diagram showing the position of centromere on different types of chromosomes.

Or

- a) What is photoperiodism?
- b) How are plants classified based on their photoperiodic response?
- c) Explain with an example each.

Section-E (OTBA) Questions

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| 24. | OTBA Question | 2 mark |
| 25. | OTBA Question | 3 mark |
| 26. | OTBA Question | 5 mark |
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